

above amendments and following remarks.

Objections to the Drawings

1. The drawings were objected to under 37 C.F.R. 1.83(a) for not showing the “enlarged diameter” as recited in claim 1. Figure 1 is submitted contemporaneously, with an accompanying separate paper. Figure 1 has been amended to show an enlarged view of the “enlarged diameter” as recited in claim 1. No new matter has been added. Thus, this grounds for objection has been rendered moot. Additionally, Figure 2 has been amended to remove an incorrect demarcation (number 42) and to properly extend the lead line for element 32. Figure 2 is also submitted contemporaneously, with the accompanying separate paper

Objections to the Specification

2. The Specification was objected to for not consisting of “proper idiomatic English”. A substitute Specification has been submitted herewith, along with a marked-up version of the changes made. Additionally, a declaration stating that no new matter has been added to the amended Specification is submitted herewith. Thus, this grounds for objection has been rendered moot.

3. The disclosure was objected because of an informality. On page 7, line 2 the recitation “third cylindrical member 16” has been changed to “third cylindrical member 17”. Thus, this grounds for objection has been rendered moot.

Claim Rejections Under 35 U.S.C. §112

4. Claims 1-8 were rejected under 35 U.S.C. §112, first paragraph, as allegedly “containing subject matter which was not described in the specification in such a way as to

enable one skilled in the art... to make and/or use the invention”. See Office Action at page 3.

As mentioned above, claims 5-8 have been cancelled. Claims 1-3 have been amended, as may be seen above, and in the appended marked-up claims.

Regarding claim 1, the Examiner stated his concern regarding the means by which the “lateral position of the cylindrical member [is] maintained in the sleeve body.” See Office Action at page 3. Claim 1, as amended, recites:

wherein **a gap** formed between an outer circumference of one of the plurality of cylindrical members and an inner circumference of the straight portion, **is smaller than** a gap formed between an outer circumference of the others of the plurality of the cylindrical members and the inner circumference of the straight portion.

Emphasis added.

That is, there is a gap formed between one cylindrical member and the straight portion of the sleeve body (recited earlier in the claim), that is smaller than a gap formed between other cylindrical members and the straight portion of the sleeve body. Lateral movement may be prevented in any of a variety of manners. However, if the subject “gap” is sufficiently small, a component (in this case, a cylindrical member) will not move enough to significantly negatively effect the function of the device (in this case, a fuel injector). For example, the range of 0.02 to 0.20 millimeters is given in the specification as a range for a gap in such an instance. See amended Specification at page, line 16 (formerly page 7, line 2 of the Specification, as filed). Thus, with a small gap, it is not necessary to be concerned about lateral movement. Any movement will not be significant, as other components of the device would ultimately prevent excess lateral movement. Thus, Applicant believes that claims 1-3, as amended satisfy the requirements of 35 U.S.C. §112. This rejection is believed moot in light of the above comments and claim amendments.

5. Claims 1-8 were rejected under 35 U.S.C. §112, second paragraph as allegedly being indefinite. Claims 4-8 have been canceled, and claims 1-3 have been amended. Claims 1-3 are believed to be in full compliance with 35 U.S.C. §112, and that these claims, as amended, are in allowable condition. For the above reasons, Applicant respectfully requests for the rejection of claims 1-3 under 35 U.S.C. §112 to be withdrawn.

Claim Rejections Under 35 U.S.C. §102

6. Claims 1-8 were rejected under 35 U.S.C. §102 as being anticipated by DeLuca (U.S. Pat. No. 6,007,000). As mentioned above, claims 4-8 have been canceled.

The Examiner stated that “DeLuca discloses a fuel injector comprising: a needle valve 11; a cylindrical member 3, 6, 8, 10, 18; a sleeve body 21; a support portion 18.” See Office Action at page 5.

DeLuca describes a fuel injector for use in a locomotive engine, and is particularly concerned with the shape of the nozzle end thereof. DeLuca fails to teach or suggest a fuel injector

wherein a gap formed between an outer circumference of one of the plurality of cylindrical members and an inner circumference of the straight portion, is smaller than a gap formed between an outer circumference of the others of the plurality of the cylindrical members and the inner circumference of the straight portion

as recited in amended claim 1. This, at least in-part, allows for benefits of the invention, including being able to assemble the fuel injector with multiple pieces, while preventing tilting of the cylindrical components. See amended Specification, Summary of the Invention. Thus, claim 1, as amended is believed patentable over the prior art or record.

Claims 2 and 3 depend from claim 1, and thus incorporate all of the subject matter

of that claim. Since claim 1 is believed patentable, so too are claims 2 and 3. Accordingly, Applicant respectfully requests for the rejection of claims 1-3, as being anticipated by DeLuca, to be withdrawn.

CONCLUSION

For these reasons, it is believed that all of the claims, as presently amended, are patentable, and that this application is in allowable condition.

Respectfully submitted,
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APPENDIX I

Please amend claims 1-3 as follows, and cancel claims 4-8:

1. (Amended) A fuel injector comprising:

[a needle valve for injecting fuel from an injection port;

a cylindrical member containing therein a pushing spring to said needle valve; and

a sleeve body for receiving said cylindrical member in an abutment condition so

as to expose said injection port;

wherein a support portion having an enlarged diameter toward an inner

circumference of said sleeve body is provided in a part of an outer circumference of said

cylindrical member.]

a nozzle body having a needle valve therein for opening and closing an injection port, the nozzle body being constructed of a cylindrical member serving as a separating plate and a cylindrical member provided on the injection port side of the separating plate;

a cylinder constructed of at least one cylindrical member so as to contain therein a plunger for pressurizing fuel; and

a sleeve body containing the nozzle body and the cylinder,

wherein the sleeve body has a straight portion having a constant inner diameter for containing the nozzle body,

wherein the nozzle body has a plurality of cylindrical members, each of the cylindrical members has a constant outer diameter and is encompassed by the straight portion of the sleeve body, and

wherein a gap formed between an outer circumference of one of the plurality of cylindrical members and an inner circumference of the straight portion, is smaller than a gap

formed between an outer circumference of the others of the plurality of the cylindrical members and the inner circumference of the straight portion.

2. (Amended) A fuel injector according to claim 1, wherein said [cylindrical member contains therein a plunger for pressurizing the fuel to be fed to said needle valve] one of the plurality of cylindrical members is said separating plate.

3. (Amended) A fuel injector according to claim 1, wherein [said support portion is formed in the middle in the axial direction of said cylindrical member] cutaways are formed in an outer circumference of said one of the plurality of cylindrical members.

FIG. 1

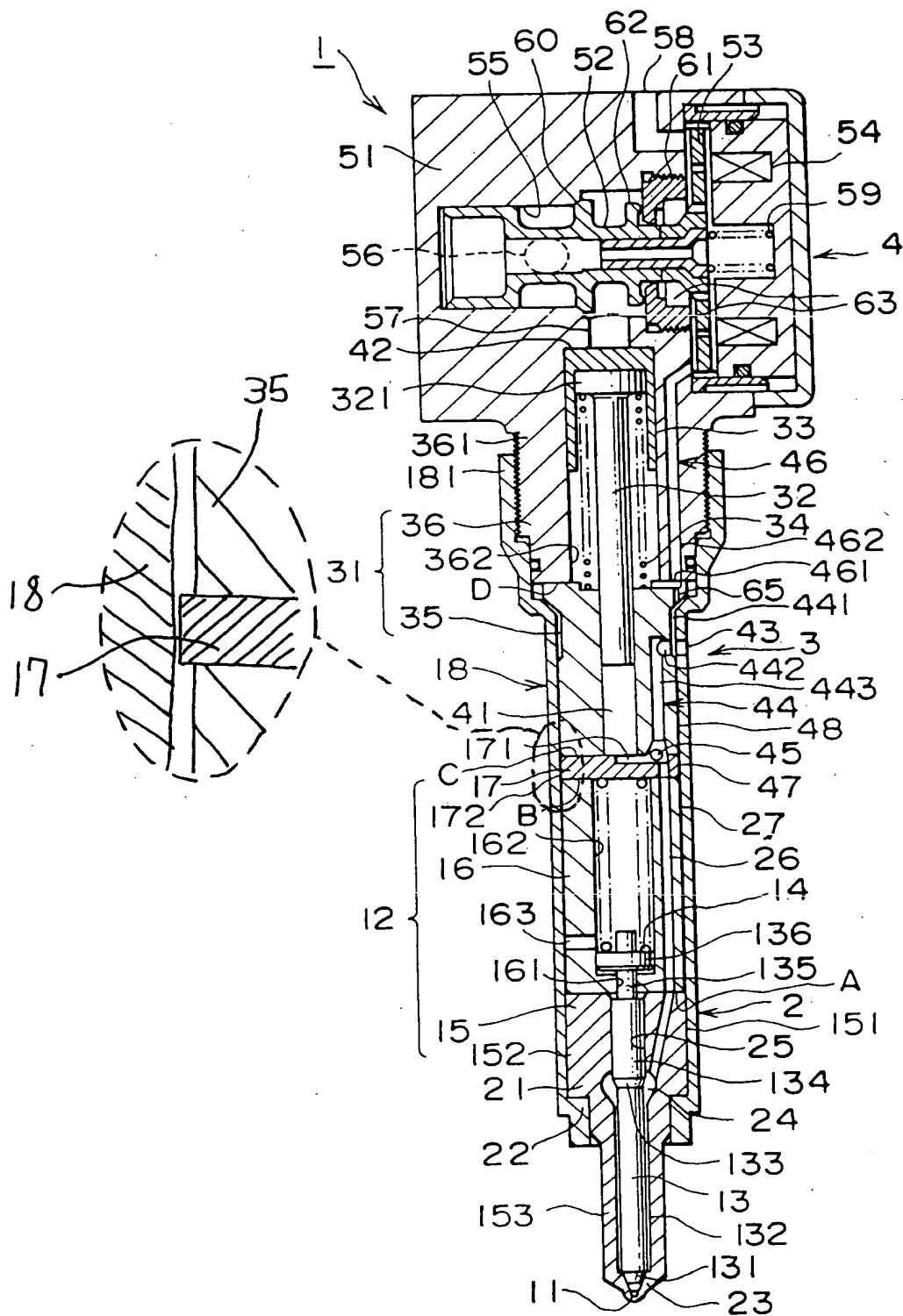




FIG. 2

